CLAIMS

Sub A7

1. Method of automatic control of the gain in a radiofrequency signal reception device, the said device comprising at least one first low-noise amplification stage placed following a reception antenna, and at least one variable-gain device placed in the reception facility, characterized in that the following steps are performed:

- neutralization of the signal received by the antenna,
- adjustment of the gain during the neutralization of the signal received until a predetermined noise level is obtained at the end of the reception facility.

2. Method according to Claim 1, characterized in that the neutralization of the signal received is carried out by cutting off the supply to the first low-noise amplification stage.

3. Method according to one of Claims 1 or 2, characterized in that, during signal reception, the following steps are performed:

- extraction of the noise power at the end of the reception facility,
- adjustment of the gain until a predetermined noise level is obtained.

4. Method according to Claim 3, characterized in that the extraction of the noise power at the end of the facility is carried out by performing the following steps:

- sampling and digitization of the signal at the end of the reception facility,
- digital demodulation of the digitized signal,
- modulation of the demodulated signal,
- calculation of the noise power from the modulated signal and the digitized signal.

5. Radiofrequency signal reception device, the said device comprising at least one first low-noise amplification stage placed following a reception antenna, and at least one variable-gain device placed in the reception facility, characterized in that it comprises:

- means for neutralizing the signal received by the antenna,

- means for adjusting the variable-gain device as a function of the noise level at the end of the reception facility.

6. Device according to Claim 5, characterized in that the means for neutralizing the signal received are switching means which switch the supply of the first amplification stage.

7. Device according to one of Claims 5 or 6, characterized in that it furthermore comprises:

- means for extracting the noise power during the reception of the signal,
- means for adjusting the variable-gain device as a function of the noise level extracted.

8. Device according to Claim 7, characterized in that the means for extracting the noise power during reception comprise :

- means of sampling and means of converting the signal at the end of the facility into a digitized signal,
- means for performing the digital demodulation of the signal and for obtaining a demodulated signal,
- means of digital modulation for modulating the demodulated signal and obtaining a modulated signal,
- means for calculating the noise power from the modulated signal and the digitized signal.

9. Device for transmitting/receiving radiofrequency signals transmitted by satellite, characterized in that it comprises the reception device of one of Claims 5 to 8.